

PAX – Tools für den OSGi Alltag

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SWIFTMIND

Agenda

- Pax Ecosystem
- Pax Construct
- Pax Runner
- Pax Exam
- Pax Web



About me

- Patrick Baumgartner
- Senior Software Consultant at Swiftmind
- Web development with Spring Framework
- OSGi with Spring DM & Spring Framework
- Agile Software Development
- Co-Author of “OSGi für Praktiker”



Pax Ecosystems

- Umbrella project for OSGi at OPS4J
- Framework and platform independent
- Tools and service implementations

Pax Ecosystem



A word cloud representing the Pax Ecosystem. The words are arranged in a dense, overlapping cluster. The colors used are orange, dark blue, and light blue. The words include: Construct, Logging, Server, Shell, Web, Swissbox, URL, Wicket, Runner, LDAP, Scanner, and Exam. The words 'Web' and 'Shell' are the largest and most prominent, while 'Exam' and 'Scanner' are the smallest.

Construct
Logging
Server
Shell
Web
Swissbox
URL
Wicket
Runner
LDAP
Scanner
Exam

Pax Construct

- Commandline Tool like Roo, Rails, Grails ...
- Maven 2 based
- Archetypes & shell scripts
- Create and manage projects



Pax Construct

- pax-create-project
- pax-add-repository
- pax-create-bundle
- pax-import-bundle
- pax-embed-jar
- pax-wrap-jar
- pax-provision
- pax-create-module
- pax-move-bundle
- pax-remove-bundle
- pax-update
- pax-clone



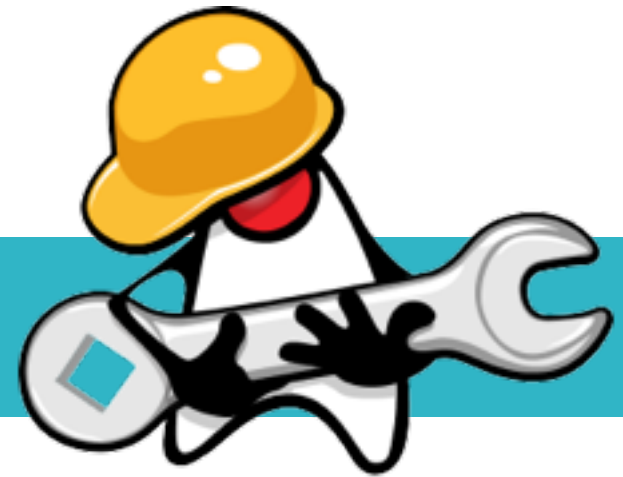
Pax Construct – Quick start

- Download from Maven repo
- Unzip archive
- Add *bin* folder to system path

-> You are ready to build the first OSGi project



Demo



PaxConstruct

Pax Runner

- Starts all major OSGi platforms
- Provisions required artifacts
- Generates configuration
- Runs target platform in a new JVM
- Running as a daemon



Pax Runner – Quick start

- Download pax runner
 - Unzip archive
 - Add *bin* folder to system path
- > Now let's run different OSGi platforms



Demo



Pax Exam

- Integration test framework
- Real integration tests
- JUnit and Pax runner based
- Configuration
 - fluent API
 - pom.xml



Pax Web

- OSGi R4 Http Service
- Web Container (RFC66)
- Based on Jetty 6
- JSP Support
- WAR Extender



Pax Web – Web Bundles

- Manifest headers
 - Bundle-ManifestVersion:2
 - Bundle-SymbolicName
 - Bundle-Version (optional)
 - Bundle-Name (optional)
 - Webapp-Context
 - Bundle-ClassPath
 - Import-Package
 - Require-Bundle



Pax Web with Pax Constuct

- Change packaging to *war*
- Override maven-bundle-plugin
- Add maven-war-plugin
- Use *web* profile or get dependencies from Maven repository



Pax Web

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Questions ?



Contact

- patrick.baumgartner@swiftmind.com
- [@patbaumgartner](#)
- <http://www.osgi-buch.com>



Pictures

- Agenda - <http://www.sxc.hu/photo/1142603>
- OSGi für Praktiker – <http://www.hanser.de/buch.asp?isbn=3-446-42094-0>
- Pax Ecosystem - http://www.abcya.com/word_clouds.htm
- Pax Construct - <http://wiki.ops4j.org/display/paxconstruct/Pax+Construct>
- Pax Web - <http://wiki.ops4j.org/display/paxweb/Pax+Web>
- Pax Exam - <http://wiki.ops4j.org/display/paxexam/Pax+Exam>
- Questions - <http://www.flickr.com/photos/orsorama/138560428>
- Resources - <http://www.sxc.hu/photo/1184809>

Resources

- <http://wiki.ops4j.org/display/ops4j/Pax>
- <http://pragprog.com/titles/cwosg/modular-java>
- <http://www.osgi-buch.com>

